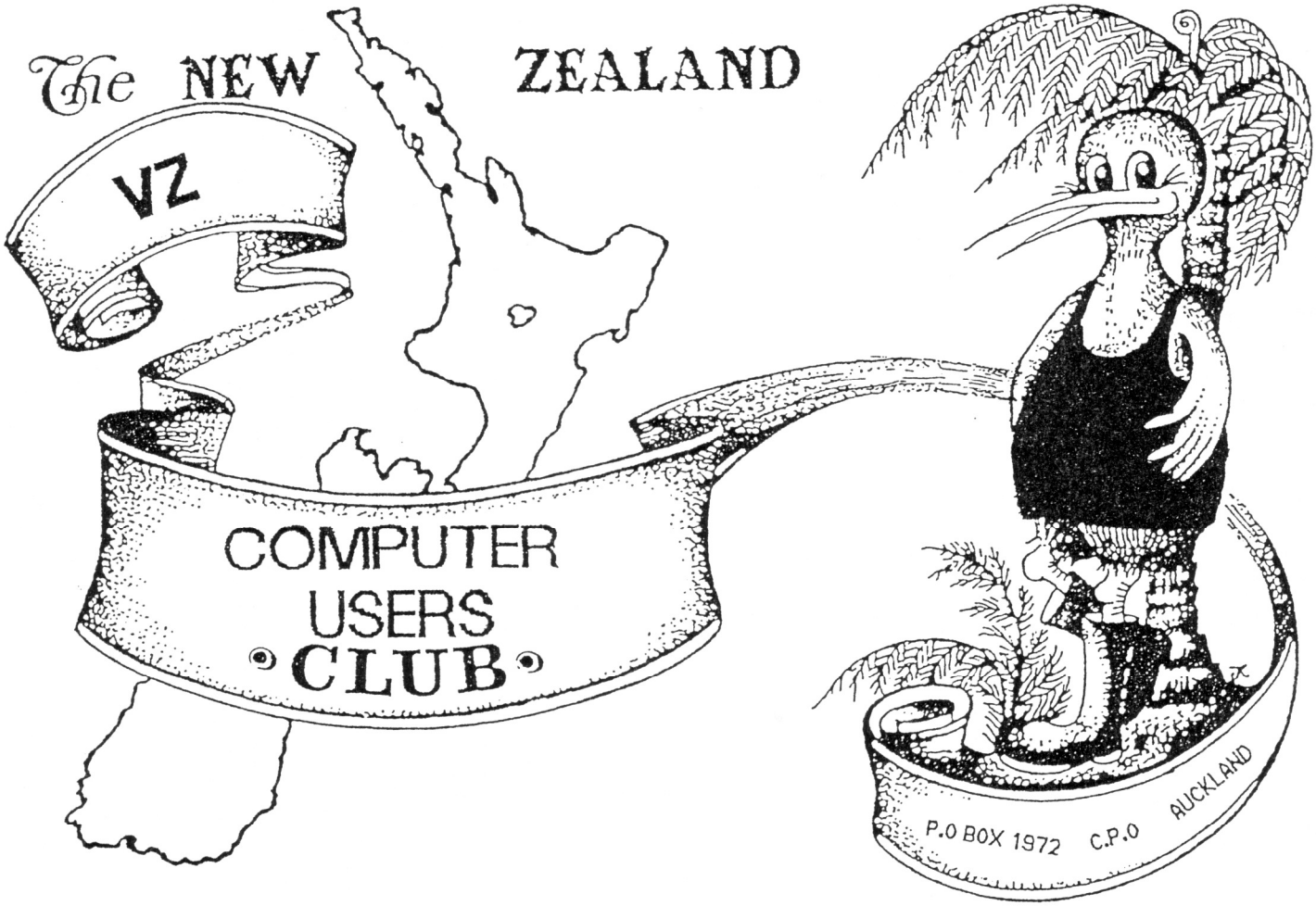
VZ LINK magazine



ISSUE 52 FEBRUARY 1991

ODDS AND ENDS

Well we made it at last, here is the February issue of your VZ newsletter.
I bet many of you have been wondering if you would get a issue this month.
I am sorry about the delay, but I have been very busy moving house and getting organised.

If you want to contact me about any problems the phone number is now: Ph. 520-6743
To those of you that have written and are still awaiting a reply, I found the file last night and will write to you before the end of the Month.
Things are very quiet as far as the computer is concerned at the moment. We still have some really interesting ideas to explore and some really good programs for you to try.

I am still looking at the idea of core group meetings on a more regular basis.
If you are interested in this idea please ring me and we can arrange something soon.
The next VZ users club meeting will be held on the following date :

SATURDAY 23 MARCH 1991

More details in the next issue. Please keep this day free if possible.

CORRECTION TO SECRET CODE PROGRAM

Here are the changes that will make this program work and spruce it up a bit.

```
Add New line :      127  SOUND 30,1
Change  line :        3  CLEAR 4500:GOSUB 550:REM INITIALISATION
Change  line :      122  I$=INKEY$:IF I$<>"" THEN 122
```

Just a word of warning here, If you type the wrong letter, DO NOT CTL-BACK ARROW and correct. The program will seem to work if you do this, but will cause a error message when you DECODE or ENCODE.
There are ways of overcoming this and when time permits I will have a look at it.

FOR SALE

I have some short cassette tapes and also second hand computer disks available for $1.00 each. All proceeds to the club and money back if not happy. Contact me if you are interested.

WANTED TO SELL OR SWAP

I have a Disk Drive, complete with controller and power supply which I would like to swap for a Telephone answering machine, Standard tape not micro.
I will sell this Disk Drive etc for $170.00 ono, if need be. Once again contact me if interested.

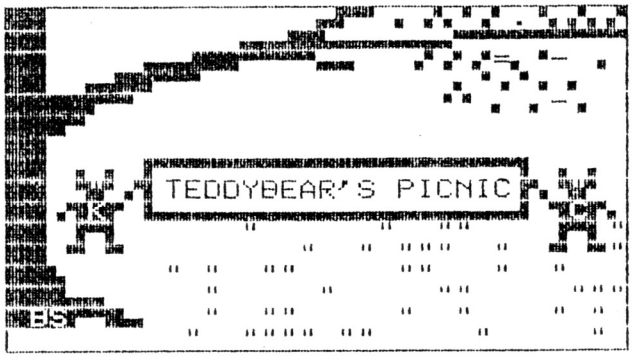
Anyway I will let you get on with reading the content of this newsletter. The next newsletter will be out by the 9th March, so you will not have to wait to long for it.

P.O BOX 1972 C.P.O AUCKLAND N.Z
AUCKLAND VZ 300/200 COMPUTER USERS CLUB (1986)
NEW ZEALAND VZ 300/200 COMPUTER USERS CLUB (1989)

ALL MATERIAL IN THIS NEWSLETTER IS SUBJECT TO COPYRIGHT.
CONTRIBUTED PROGRAMS AND ARTICLES CAN BE REPRODUCED ON THE UNDERSTANDING THAT IT IS FOR THE PRIVATE USE OF SUBSCRIBERS ONLY.

COPYRIGHT IS ALWAYS RETAINED BY THE AUTHOR.
THIS CLUB WILL NOT BE HELD RESPONSIBLE FOR ANY BREACHING OF COPYRIGHT CAUSED BY THE PUBLICATION OR USE OF ANY MATERIAL SENT IN UNDER A FALSE NAME.

YOU ARE WELCOME TO PHONE ME ON.....PHONE 520-6743 AFTER 6.00 PM




```
10 REM"[illegible]
20 CLS:COLOR 2,1
30 FORQ=1TO15:PRINT"[illegible]":NEXT:PRINT@386,"[illegible]":PRINT@418,"[illegible]"
40 PRINT@450,"[illegible]"
50 PRINT@130,"[illegible]":PRINT@162,"[illegible]"
60 PRINT@100,"[illegible]":PRINT@71,"[illegible]"
70 PRINT@44,"[illegible]":PRINT@16,"[illegible]"
80 PRINT@20,"[illegible]"
90 PRINT@85,"[illegible]"
100 PRINT@119,"[illegible]"
110 PRINT@150,"[illegible]"
120 P=28998:POKEP+123,2:POKEP+124,19
130 R=P:FORQ=1TO9:POKER+RND(25),98:NEXT:P=P+32:IFP<29183,130
140 PRINT@227,"[illegible]":PRINT@259,"[illegible]":PRINT@290,"[illegible]"
150 PRINT@323,"[illegible]":PRINT@355,"[illegible]"
160 PRINT@252,"[illegible]":PRINT@282,"[illegible]":PRINT@316,"[illegible]"
170 PRINT@348,"[illegible]":PRINT@380,"[illegible]"
180 PRINT@231,"[illegible]":PRINT@295,"[illegible]"
190 FORQ=232TO249:PRINT@Q,"[illegible]":PRINT@Q+64,"[illegible]":NEXT
200 PRINT@250,"[illegible]":PRINT@314,"[illegible]"
210 PRINT@264,"TEDDYBEAR'S PICNIC"
500 REM "TEDDYBEAR'S PICNIC"
510 SOUND18,3;21,1;20,1;21,1;20,1;18,3;21,1;20,3;21,1;18,1
520 SOUND 20,1;21,1;20,3;21,1;18,3;00,1;16,1;21,3;25,1;23,1
530 SOUND25,1;23,1;21,3;25,1;23,3;25,1;21,1;23,1;25,1;23,3
540 SOUND25,1;21,3;00,1;28,1;30,3;28,1;30,3;28,1;23,1;25,1
550 SOUND28,1;25,3;21,1;23,3;21,1;23,3;21,1;16,1;18,1;21,1
560 SOUND18,3;16,1;18,3;21,1;16,3;21,1;18,1
570 SOUND20,1;21,1;16,3;25,1;23,7;21,2;00,3
580 SOUND18,5;18,5;17,5;18,5;23,3;18,1;21,6;18,1;17,3;18,1;23,3
590 SOUND18,1;21,3;18,1;23,1;21,1;18,1;17,3;18,1;21,3;20,1
600 SOUND19,7;00,2;19,5;19,5;18,5;19,5;25,3;24,1;23,4;00,1
610 SOUND23,1;22,3;23,1;25,5;23,5;21,4;19,5;18,3;21,1;21,6
620 SOUND00,3;18,5;18,5;17,5;18,5;23,3;18,1;21,6;18,1;17,3
630 SOUND18,1;23,3;18,1;21,3;18,1;23,1;21,1;18,1;16,3;14,1
640 SOUND26,7;00,1;23,1;26,2;00,1;23,1;26,1;25,1;26,1;28,1
650 SOUND26,1;23,1;21,3;20,1;21,3;23,1;21,3;14,1;16,3;18,1
660 SOUND19,5;21,2;23,1;18,1;00,1;16,1;00,1;14,7
670 PRINT@264,"[illegible]"
680 FORQ=1TO3000:NEXT:GOTO210
```

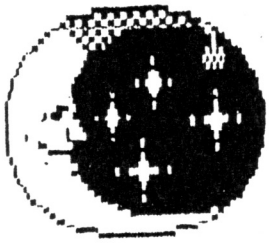
```
740 PRINT"YOU MUST FIGHT!!":FORI=1TO500:NEXTI:GOSUB969:GOSUB1000
741 RETURN
750 PRINT"YOU ARE AT A 'T' JUNCTION."
751 PRINT"YOU MAY GO EAST, SOUTH OR WEST";:GOSUB5000
752 IFD$="S"THENGOTO590
753 IFD$="E"THENGOTO800
754 IFD$="W"THENGOTO600
755 GOSUB999:GOSUB5000:GOTO752
760 REM *****WARLOCK!!!!****
761 PRINT"YOU COME OUT INTO A HUGE ROOM"
762 PRINT"AND THERE, CHAINED TO THE WALL"
763 PRINT"IS A PRETTY GIRL;THE PRINCESS!!"
764 PRINT"YOU HURRY TOWARDS HER, BUT AS "
765 PRINT"YOU DO, THE FLOOR GIVES A LURCH"
766 PRINT"AND YOU FALL!   YOU LAND ON "
767 PRINT"YOUR BACK, AND LOOKING UP, YOU"
768 PRINT"SEE A TALL FIGURE FLOATING "
769 PRINT"ABOVE YOU!! IT'S MARNON MIRE!!!":GOSUB51000
770 PRINT"HIT RETURN TO FIGHT!!":INPUTT$:WIZ=1:GOSUB5000
771 PRINT"AS YOU DRAW YOUR SWORD, MIRE"
772 PRINT"MAKES A SUDDEN PASS WITH HIS"
773 PRINT"HANDS, AND YOUR SWORD FLIES "
774 PRINT"FROM YOUR GRASP AND SHATTERS"
775 PRINT"TO PIECES!!!"
776 PRINT"YOU ARE NOW TOTALLY UNARMED!!"
777 PRINT"WILL YOU TRY AND FIGHT(F),OR":LET W=1
778 PRINT"WILL YOU TRY SOMETHING ELSE";:INPUTD$
779 IFD$="F"THENGOTO15500
780 IFD$="DOOM"THENGOSUB15600
781 GOSUB999:GOSUB5000:GOTO779
782 GOSUB963:IFCQR=1THEN790
783 PRINT"THERE APPEARS TO BE A PILE OF"
784 PRINT"HUMAN REMAINS IN THE CENTRE OF":CQR=1
785 PRINT"THE ROOM.  SUDDENLY THE CORPSE"
786 PRINT"STANDS UP!  IT IS ALIVE!!!"
787 PRINT"IT IS ARMED, AND BEGINS ITS"
788 PRINT"ATTACK!  YOU MUST FIGHT!"
789 PRINT"HIT RETURN!...";:INPUTT$:GOSUB1000:RETURN
790 PRINT"YOU SEE THE REMAINS OF THE"
791 PRINT"LIVING CORPSE IN THE CORNER."
792 PRINT"IT CANNOT HARM YOU AGAIN.":RETURN
800 PRINT"YOU ARE NOW AT A COMPLEX "
801 PRINT"JUNCTION.  PATHS LEAD TO THE"
802 PRINT"NORTH, NORTH-WEST, WEST, SOUTH,"
803 PRINT"EAST,SOUTH-EAST, & NORTH-EAST.";:GOSUB5000
804 IFD$="N"THENGOTO880
805 IFD$="NW"THENGOTO630
806 IFD$="W"THENGOTO750
807 IFD$="S"THENGOTO830
808 IFD$="SE"THENGOTO850
809 IFD$="E"THENGOTO357
810 IFD$="NE"THENGOTO870
815 GOSUB999:GOSUB5000:GOTO804
830 PRINT"YOU ARE IN A SMALL ROOM WITH"
831 PRINT"MARKINGS ON THE WALL.":IFOGRE=1THEN844
832 PRINT"BUT THERE IS NO TIME TO LOOK":OGRE=1
833 PRINT"AROUND, BECAUSE THERE IS A "
834 PRINT"HUGE FORM RISING FROM THE"
835 PRINT"FLOOR!!  IT IS AN OGRE!!!":GOSUB935:GOSUB51000
836 PRINT"HIT RETURN TO FIGHT!":INPUTT$:GOSUB1000
837 PRINT"YOU SINK TO THE FLOOR AFTER "
838 PRINT"THE BATTLE."
```

```
839 PRINT"YOU HAVE TWO WAYS, NORTH AND "
840 PRINT"EAST";:GOSUB5000
841 IFD$="N"THENGOTO800
842 IFD$="E"THENGOTO450
843 GOSUB999:GOSUB5000:GOTO841
844 PRINT"YOU RECOGNISE IT AS THE OGRE'S"
845 PRINT"ROOM.  THE GREAT CORPS LIES"
846 PRINT"WHERE IT FELL.":GOTO839
850 PRINT"YOU HAVE ARRIVED AT A DEAD END."
851 PRINT"YOU LOOK AROUND, AND SEE ":IFWW<>0THEN866
852 PRINT"FADED LETTERS ON THE WALL!"
853 PRINT"THEY SAY:":PRINT"TRAVELLER IF THOU HAST A SECRET"
854 PRINT"WHICH IS UNTOLD TO THEE;"
855 PRINT"SHOUT THE NAME OF THIS GREAT                MAZE;"
856 PRINT"AND SEE WHAT THOU SHALT SEE!"
857 PRINT"YOU DON'T UNDERSTAND THE WORDS"
858 PRINT"FOR A SECOND, THEN YOU REALISE!"
859 PRINT"YES, YOU DO HAVE A SECRET!"
860 PRINT"YOUR SECRET WEAPON!  DO YOU "
861 PRINT"WANT TO TRY";:INPUTT$:IFT$="N"THENGOTO865
862 PRINT"OK, TRY IT; TYPE IN 'DOOM'...";
863 WW=1
864 GOSUB5000
865 PRINT"YOU RETRACE YOUR STEPS....":FORI=1TO1000:NEXTI:GOTO800
866 PRINT"THAT THE LETTERS HAVE FADED,"
867 PRINT"BUT YOU STILL HAVE YOUR"
868 PRINT"SECRET WEAPON!":GOTO865
870 PRINT"AFTER A SHORT WALK, YOU TURN A"
871 PRINT"CORNER AND THERE IS A ";:IFGOB=1THENGOTO875
872 PRINT"GOBLIN!!  HE DRAWS HIS SWORD "
873 PRINT"WITH A SNARL!!  YOU MUST FIGHT!":GOB=1:GOSUB51000
874 PRINT"HIT <<RETURN>>":INPUTT$:GOSUB940:GOSUB1000:GOTO877
875 PRINT"GOBLIN'S CORPSE.   THERE IS "
876 PRINT"NOTHING ELSE.  YOU RETURN.":GOTO800
877 GOSUB15050:PRINT"YOU REST, THEN RETURN.":GOTO800
880 REM **HARPIE ATTACK!!***
881 PRINT"YOU COME TO A DEAD END, OPEN TO"
882 PRINT"THE SKY.":IFHARP=1THENGOTO890
883 PRINT"YOU ARE ABOUT TO TURN AND ":HARP=1
884 PRINT"GO BACK WHEN A SCREAM COMES"
885 PRINT"FROM OVERHEAD!!  YOU LOOK UP "
886 PRINT"AND THERE, DECENDING ON YOU IS":GOSUB51000
887 PRINT"A HARPIE!!!   YOU MUST FIGHT!! HIT <<RETURN>>":INPUTT$
888 GOSUB930:GOSUB1000:PRINT"WELL DONE! THE HARPIE LIES DEAD"
889 PRINT"BEFORE YOU.":GOTO893
890 PRINT"AND THERE IS THE DEAD CORPSE OF"
891 PRINT"THE HARPIE.   THERE IS NOTHING "
892 PRINT"MORE OF INTREST."
893 PRINT"YOU RETRACE YOUR STEPS....":FORI=1TO1000:NEXTI:GOTO800
900 REM ****BATTLE VARIABLES***
902 REM 1) UNICORN
903 F$="UNICORN":Z=4::ZZ=3:RETURN
905 REM 2) DWARF
906 F$="DWARF":Z=3:ZZ=3:RETURN
910 REM 3) CYCLOPS
911 F$="CYCLOPS":Z=5:ZZ=4:RETURN
912 REM 4) MANTICORE
913 F$="MANTICORE":Z=8:ZZ=6:RETURN
915 REM 5) GUARDIAN
916 F$="GUARDIAN":Z=6:ZZ=5:RETURN
```

```
920 REM 6) DRAGON
921 F$="DRAGON":Z=12:ZZ=15:RETURN
930 REM 8) HARPIE
931 F$="HARPIE":Z=10:ZZ=8:RETURN
935 REM 9) OGRE
936 F$="OGRE":Z=11:ZZ=7:RETURN
940 REM 10) GOBLIN
941 F$="GOBLIN":Z=6:ZZ=5:RETURN
950 REM 11) WARLOCK
951 F$="WARLOCK":Z=28:ZZ=17:RETURN
960 REM 12) GIANT BEETLE
961 F$="BEETLE":Z=6:ZZ=7:RETURN
963 REM 13) LIVING CORPSE
964 F$="CORPSE":Z=7:ZZ=5:RETURN
965 REM 14) GORGON
966 F$="GORGON":Z=11:ZZ=7:RETURN
967 REM 15) ORC
968 F$="ORC":Z=9:ZZ=7:RETURN
969 REM 16) MONITOUR
970 F$="MONITOUR":Z=12:ZZ=9:RETURN
971 REM 15) GHOUL
972 F$="GHOUL":Z=10:ZZ=8:RETURN
980 DATA "NOPE!","TRY AGAIN!","THAT'S NOT RIGHT!","WRONG!"
981 DATA "WHAT??","EH??","I DON'T UNDERSTAND!","WASSAT??"
982 DATA "DOES NOT COMPUTE!!","THAT'S NOT RIGHT!!"
990 FORII=1TO10
991 READ E$(II)
992 NEXTII:II=0
993 RETURN
995 IFII>10THENII=1
996 RETURN
999 II=II+1:GOSUB995:PRINTE$(II):RETURN
1000 REM **BATTLE!!!***
1010 CLS
1011 IFWW=0THENGOTO1020
1012 PRINT"DO YOU HAVE SOMETHING ELSE IN"
1013 PRINT"MIND";:INPUTT$
1014 IFT$="Y"THENPRINT"OK, WHAT";:INPUTT$
1015 IFT$="DOOM"THENPRINT"WELL DONE ";NAME$;"!!":GOTO2500
1016 PRINT"THAT'S NO GOOD! YOU MUST FIGHT!"
1020 SOUND30,3:SOUND25,1:SOUND30,1:SOUND25,1:SOUND30,4
1025 PRINT"OK ";NAME$;", HERE ARE THE"
1027 PRINT"RATINGS FOR YOU AND THE ";F$
1030 PRINT"YOUR STAMINA RATING IS:"X
1035 PRINT"YOUR SKILL RATING IS:"S:ZZ=ZZ+Y
1040 PRINTF$;"'S STAMINA:"Z
1085 PRINTF$;"'S SKILL:"ZZ
1090 LET H=0
1100 FORI=1TO2000:NEXTI
1110 CLS:PRINT@35,"BATTLE WITH ";F$
1115 H=H+1
1120 PRINT@87,"ROUND ";H
1130 A=130:B=0
1135 PRINT@108," FOR ENEMY"
1140 GOSUB10100
1145 LET O=N:PRINT@170,"SKILL:";ZZ:
1147 LET R=O+ZZ:PRINT@202,"ATTACK STRENGTH:";R
1150 A=290:B=0
1160 PRINT@268," FOR YOURSELF"
1170 GOSUB10100
```

PART 4 NEXT ISSUE

GALAXY WHERE NO MAN HAS GONE BEFORE ... DISCOVER THE RINGS OF SATURN ..



SATURN

BY

KEN CLARKE

The following program draws a spectacular view of Saturn, viewed approximately 200,000 miles away from its surface and roughly at latitude 30 degrees.

At the start 150 stars flash and a banner zips across the top of the screen. Suddenly a foreign space ship descends into view, an ominous flashing of it's portals occurs while it's motors slowly tick into life. Then with full power applied, motors screaming, it is off on it's ill fated journey.

The planet, meanwhile begins to be drawn. This is followed by it's many rings. Accompanying this is the sound channel of the VZ. After the final ring has been drawn, there is a short climax as Saturn flashes it's full brilliance.

A French alien from Mars drops out of the top of the screen. You hear him fire his retro motors prepatory to going into final orbit before landing. He plants a flag at the North Pole, pronouncing the planet as his to the tune of the French National Anthem.

Then you hear him lift off on his way home. All seems well, until the journey comes to a tragic end as his ship slams into a meteor shower and explodes.

```
10 REM "[illegible]
100 CLEAR1000
110 A$="[illegible]
120 B$="[illegible]
130 C$="[illegible]
140 A$=A$+B$+C$                                          :set up banner
200 DIMS$(9)                                             [NOTE: 13s = 13 spaces : gM = graphic M : (") = Inverse " ]
210 S$(0)="                    "                         :24s
220 S$(1)="          \[illegible]/        "              :13sgM(")gK9s
230 S$(2)="           [illegible]         "              :13sgA(I)gS9s
240 S$(3)="       [illegible]\[illegible]/[illegible]    "   :8sgA2gYgM(=)gZ(=)gZ(=)gK2gYgS4s
250 S$(4)="    [illegible]    "                          :4sgA2gYgØgZ.....2gYgS
260 S$(5)="          [illegible]  "                     :11sgDgW(#)gZ(#)gQgF
270 S$(6)="          [illegible]"                       :13s3T
281 S$(7)="[illegible]":S$(8)="[illegible]"
300 DATA229,033,160,000,001,003,000,205,092,052,225,201
310 POKE30862,241:POKE30863,143
320 FORT=-28687TO-28676:READD:POKET,D:NEXTT              :sound routine
400 COLOR,1:POKE30744,1                                  :set Mode & Colour
410 CLS:FORI=1TO50
420 PRINT@137,"--> SATURN <--":PRINT@207,"BY":PRINT@267,"KEN CLARKE"   :print title
430 PRINT@RND(510),"*";:PRINT@RND(300),".";:PRINT@RND(510),"+";
440 NEXTI:                                               :print 150 stars
500 FORI=1TO200:PRINT@0,LEFT$(A$,31)
510 A$=MID$(A$,2,LEN(A$))+LEFT$(A$,1):NEXTI              :scroll banner
600 FORR=0TO256STEP32:PRINT@R,""
610 FORS=0TO6:PRINTS$(S):NEXTS:NEXTR                     :lower space ship
700 FORI=1TO20:PRINT@RND(287),"*";:NEXTI                 :replace lost stars
800 FORI=1TO155:PRINT@0,LEFT$(A$,31)
810 A$=MID$(A$,2,LEN(A$))+LEFT$(A$,1)                    :replace banner
900 PRINT@391,S$(7):PRINT@391,S$(8)                      :revolve space ship
1000 POKE-28685,I:X=USR(0):NEXTI                         :sound of engines
1010 POKE-28682,31:FORI=60TO1STEP-1:POKE-28685,I:X=USR(0):NEXTI   :sound of lift off
```

```
1100 MODE(1):COLOR4,0                                              :set Mode & Colour
1110 FORA=1TO90
1120 SET(63+SIN(A*0.07)*24,30+COS(A*0.07)*15)                      :draw Saturn
1130 SOUNDRND(16),1:NEXT:COLOR2                                    :randum sound blips
1140 FORA=92TO34STEP-2:SET(A,30)
1160 SOUNDRND(16)+15,1:NEXTA
1170 SET(33,29):SOUND16,1
1180 FORA=34TO38STEP2:SET(A,28)
1200 SOUNDRND(16)+15,1:NEXTA
1210 FORA=87TO92STEP2:SET(A,28)
1230 SOUND16,1:NEXTA
1240 SET(93,29):SOUND16,1:COLOR3                                   :draw ring  1
1250 FORA=124TO56STEP-1
1260 SET(63+SIN(A*0.07)*35,30+COS(A*0.07)*3)
1270 SOUNDRND(16)+7,1:NEXT:COLOR4                                  :draw ring  2
1280 FORA=126TO54STEP-1
1290 SET(63+SIN(A*0.07)*45,30+COS(A*0.07)*5)
1300 SOUNDRND(16)+13,1:NEXT:COLOR2                                 :draw ring  3
1310 FORA=128TO52STEP-1
1320 SET(63+SIN(A*0.07)*55,30+COS(A*0.07)*7)
1330 SOUNDRND(16)+3,1:NEXT:COLOR3                                  :draw ring  4
1340 FORA=130TO050STEP-1
1350 SET(63+SIN(A*0.07)*63,30+COS(A*0.07)*9)
1360 SOUNDRND(16)+15,1:NEXT                                        :draw ring  5
1370 FORA=1TO255STEP4:POKE-28685,A:X=USR(0)
1380 FORC=0TO1:COLOR,C:NEXTC
1400 NEXT:COLOR,0                                                  :flash Saturn & Rings
1410 C=61:FORT=60TO1STEP-1
1420 POKE-28682,T:POKE-28685,C:C=C-1:X=USR(0):NEXTT                :space ship leaves Mars
1430 POKE-28682,10
1440 FORA=60TO0STEP-1
1450 COLOR4:SET(57+SIN(A*0.07)*63,8+COS(A*0.07)*7)
1460 R=RND(254)+1:POKE-28685,A+50:X=USR(0)                         :randum bleeps
1470 IFA=60ORA=23ORA=0,SOUND7,1                                    :marker blips on manouvers
1480 COLOR2:SET(57+SIN(A*0.07)*63,8+COS(A*0.07)*7)
1490 RESET(57+SIN(A*0.07)*63,8+COS(A*0.07)*7)
1500 NEXTA:SET(57,15):COLOR3                                       :plot/unplot position
1510 C=1:FORT=1TO60:POKE-28682,T:POKE-28685,C:C=C+1:X=USR(0):NEXT  :space ship lands
1520 SET(57,15):SET(57,14):SET(57,13):SET(56,13)                   :Alien raises flag
1600 DATA17,1,17,3,17,1,22,4,22,4,24,4,24,4,29,5,26,2,22,2,0,1
1610 DATA22,1,26,3,22,1,19,4,27,6,24,3,21,1,22,6,0,3,22,1,22,3
1620 DATA24,1,26,4,26,4,26,4,27,3,26,1,26,4,24,4,0,4,24,3,26,1
1630 DATA27,4,27,4,27,4,29,3,27,1,26,6,0,4,29,3,29,1,29,4,26,3
1640 DATA22,1,29,4,26,3,22,1,17,6,0,3,17,1,17,3,21,1,24,6,27,4
1650 DATA24,3,21,1,24,4,22,4,20,6,19,4,22,3,22,4,21,3,22,1,24,7
1660 DATA0,2,24,1,25,5,25,2,25,2,25,2,27,2,29,2,24,7,25,2,24,2
1670 DATA22,5,22,2,22,2,25,2,24,2,22,2,22,4,21,2,0,9,29,1,29,9
1680 DATA29,1,26,3,22,1,24,7,0,3,29,1,29,9,29,1,26,3,22,1,24,7
1690 DATA0,2,17,4,22,6,0,4,24,4,26,6,0,6,27,6,29,4,31,4,24,7
1700 DATA0,2,31,4,29,9,26,1,27,3,24,1,22,7,0,4                     :the Marsellaise
1710 FORM=1TO118:READF,D:SOUNDF,D:NEXTM
1800 C=100:FORT=60TO1STEP-1:POKE-28682,T:POKE-28685,C:C=C-1
1810 X=USR(0):NEXTT                                                :lift-off
1900 MODE(0):POKE30744,0                                           :set Mode & Screen
2000 FORS=0TO6:PRINTS$(S):NEXTS:PRINT:PRINT:PRINT:PRINT            :raise space ship
2010 FORR=055TO1STEP-1
2020 PRINT@263,S$(7):PRINT@263,S$(8):PRINT@173," [illegible] "     :revolve space ship
2030 POKE-28685,R:X=USR(0):PRINT@173,"\[illegible]/":NEXTR         :rotate radar scanner
2040 POKE-28682,8:FORT=155TO90STEP-7:POKE-28685,T:X=USR(0):NEXTT   :set engine speed
2045 POKE30771,1:PRINT@263," -W-H-O-O-S-H- "                       :collision with meteor
2050 FORW=1TO5:FORQ=1TO6:PRINT@RND(500),MID$(S$(Q),14,2);"   ";
2060 NEXTQ:NEXTW:POKE30744,1
2070 FORW=232TO296STEP32:PRINT@W,S$(0):NEXTW
2090 SOUND1,1:POKE-28682,100:POKE-28685,255:X=USR(0)               :C-R-A-S-H
2100 PRINT@264,"[illegible]
2110 POKE30744,0:FORQ=1TO10000:NEXTQ:GOTO100
```

REVIEWS SECTION

FORTH A REVIEW

THE FORTH TUTOR VZ300 VERSION by Tim Hartnell
(The amazing VZ300 Omnibus)

Having no knowledge of Forth whatsoever when I set out to type in this program I was surprised at how easy a language it is to follow. As I was writing on a VZ300 without the advantage of Extended Basic I was able get up a working program without much hassle. The only program alterations that I had to perform were to change 3 ON-GOSUB lines to normal GOSUBs. The article accompanying the program is very informative and the program dictionary contains 63 definitions with room in it for another 50 user defined definitions. Following the examples in the article I was able to make use of the program the moment that I had finished typing it in. Upon booting up the program one is asked whether the stack is to be printed or not. As I had never used FORTH before I had the stack printed and was able to follow on screen step by step all thatwas happening as I put the program through its paces. I was able to SQUARE, DUP, ROT, DROP, SWAP and FORGET with the greatest of ease. For anyone wanting to do more with their VZ I would recommend this program, even to the extent that it justifies the cost of the book. For once I can find no fault with Tim's work.

Review supplied by Barry Newell

PENGUIN

```
You have to kill all the ice     : KEYBOARD      JOYSTICK
monsters by making blocks of     : (Q)-----UP----(UP)
ice crash into the ice monsters  : (A)-----DOWN--(DOWN)
but there is a timer that starts: (M)-----LEFT--(LEFT)
at 99 and you have 4 men. If you: (,)-----RIGHT-(RIGHT)
touch one of the ice monsters    : (SPACE)-PUSH--(FIRE)
you will die. There are 31
frames in the game, each time you start a new game the frame
is different.
```

Review supplied by Michael D. Smith

Basic BASIC

Gordon Findlay continues a series on BASIC for beginners.

The message this month is "divide and conquer". It might also be "don't keep re-inventing the wheel". In other words, SUBROUTINES.

A subroutine is a part of a program, which can be called into play at any time, and which returns control to the calling program when finished. It is rather like the famous recipe book instruction, for cooking hare: "first catch your hare". The recipe didn't say how to – those instructions could be found in a hunting book. Once the hare was caught, the cook returned to the recipe book for the next step, which might be another "subroutine" or group of instructions – "next skin your hare". Enough of this hare, let's look at a BASIC example.

Very often in programming we need to sort arrays into numerical order. Quite often we will want to sort arrays several times in the same program. Wouldn't it be nice if we could write a program including the line:

100 SORT ARRAY A.

Now in one or two very powerful computer systems this is a perfectly acceptable command. In some of the more advanced BASIC there is a similar command. But in most versions of BASIC, the command to SORT would require several lines of programming. And of course, if the same sort was needed in another part of the program, the same lines of code could be copied in. But the subroutine mechanism allows the sorting code to be written once only and used repeatedly.

Let's imagine that the sorting code was written at a high line number – say 20000. Then line 110 above could be replaced by 110 GOSUB 20000.

The GOSUB (GO to SUBroutine) command works just like a GOTO, but the program remembers where it was before the GOSUB. At the end of the subroutine – e.g. at the end of the sorting – place the command RETURN. This command sends the program back to the point it was called from (the next statement actually). If we needed to sort again at line 220, the same instruction GOSUB 20000 could be used. This time the RETURN would transfer back to the statement after line 220. I have drawn a diagram which might make this clear, or might not. The skeleton program is in the left-hand column, the subroutine in the right. The arrows indicate the jumping around which occurs.

There are several reasons for using subroutines. The first, and the original, was to save space by including the code once only, no matter how often it was used. Another important one is that subroutines can be re-used from program to program. In fact, there are books full of tried and tested subroutines, just waiting to be used. Once you have written a subroutine to perform some task, it can be kept for use the next time you have a similar task.

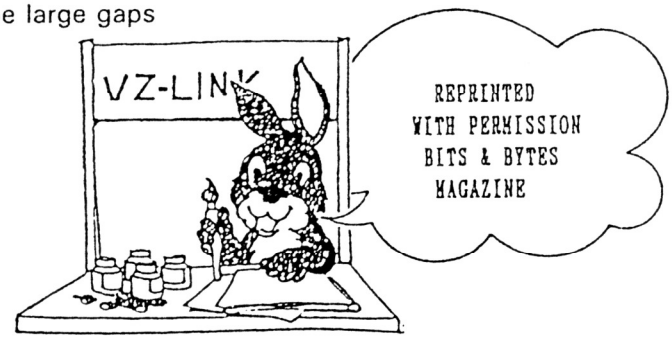
Another use is slightly different. Most people find large programming tasks fairly intimidating. Use subroutines to break the large task into smaller ones. Program each of the smaller tasks, breaking each of these up into even smaller if necessary. Then make each of them a subroutine, and call them (that is, use them as the target of a GOSUB) in turn. It's like shifting a rock – if the rock is too big to move, smash it up, and move each of the little pieces.

Where do subroutines go? The most common place is after the END statement of the main part of the program. This keeps them carefully out of the way. Many versions of BASIC run faster if the subroutines which are used often occur at the beginning of the program. This means that a GOTO is necessary to skip around them when the program begins.

```
10 REM DIMENSION THE ARRAY
20 DIM A(100)
30 . . . . .
   . . . . .
110 GOSUB 20000 ---------->  20000 REM SUBROUTINE STARTS HERE
120 (returns here the first time)  20010 . . . . .
130 . . . . .                          . . . . .
    . . . . .                  20999 REM SUBROUTINE FINISHES NOW..
220  GOSUB 20000 <----------   21000 RETURN
230 <(returns here the secon d time)
240 . . . . .
    . . . . .

900  END
```

(In an actual program of course, the right-hand column would appear beneath the left, with all the statements in numerical order, although there may be large gaps in the numbering.)



TAPE BACKUP

NOTE: For those of you that do not have a Editor Assembler program to be able to use this routine, a copy is available from me at a reasonable price. Peter.

I have included one short m/c program from Frank Rees that you may like to try, it is a very simple one but very handy if you want to make a back up copy of some tapes, it uses the computer to give you a digital copy of the original , what you do is load the program and run, then have two recorders hooked up to the computer (tape in--tape out) and what happens is that when you press play on recorder one the computer doesn't load it into memory but sends it back out to recorder two as a true digital copy. very handy for those programs that you can't copy any other way.

```
001 , COPIER 30 JUNE '86
002 , FRANK REES
003       CALL 1C9H                A534 CD C9 01
004 NOW   DI                       A537 F3
005 LOOP  LD    A,(6800H)          A538 3A 00 68
006       BIT   6,A                A53B CB 77
007       JR    Z,ZERO             A53D 28 09
008 ONE   AND   80H                A53F E6 80
009       OR    57H                A541 F6 57
010       LD,   (6800H),A          A543 32 00 68
011       JR    LOOP               A546 18 F0
012 ZERO  AND   80H                A548 E6 80
013       OR    20H                A54A F6 20
014       LD    (6800H),A          A54C 32 00 68
015       JR    LOOP               A54F 18 E7
ERRORS : 00000
```

MODE(1) PEEK & POKE CODES

Compiled by Matthew Taylor

Well, here is a Godsend for those of you who have tackled POKEing in Lo-Res.
Its a Hi-Res PEEK and POKE chart. Your VZ has, when POKEing in Hi-Res, 32 locations going across the screen and 64 going down. Each one of the 32 horizontal locations are made up of the four colors available in Hi-Res.
You may POKE any value between 0 and 255 inclusive, (giving you 256 options), to give any combination of these colors. In other words, the POKE value specified after a screen location represents a combination of a four part pixel.
Hi-Res starts at 28672 (dec) and ends at 30719 (dec).

ie.. To place a yellow + blue + yellow + blue (YBYB) pixel in the top left hand corner of the screen, select MODE(1) and POKE 28672,102.

CONTINUED ON NEXT PAGE

GREEN				YELLOW			
G G G G	0.	G B G G	32.	Y G G G	64.	Y B G G	96.
G G G Y	1.	G B G Y	33.	Y G G Y	65.	Y B G Y	97.
G G G B	2.	G B G B	34.	Y G G B	66.	Y B G B	98.
G G G R	3.	G B G R	35.	Y G G R	67.	Y B G R	99.
G G Y G	4.	G B Y G	36.	Y G Y G	68.	Y B Y G	100.
G G Y Y	5.	G B Y Y	37.	Y G Y Y	69.	Y B Y Y	101.
G G Y B	6.	G B Y B	38.	Y G Y B	70.	Y B Y B	102.
G G Y R	7.	G B Y R	39.	Y G Y R	71.	Y B Y R	103.
G G B G	8.	G B B G	40.	Y G B G	72.	Y B B G	104.
G G B Y	9.	G B B Y	41.	Y G B Y	73.	Y B B Y	105.
G G B B	10.	G B B B	42.	Y G B B	74.	Y B B B	106.
G G B R	11.	G B B R	43.	Y G B R	75.	Y B B R	107.
G G R G	12.	G B R G	44.	Y G R G	76.	Y B R G	108.
G G R Y	13.	G B R Y	45.	Y G R Y	77.	Y B R Y	109.
G G R B	14.	G B R B	46.	Y G R B	78.	Y B R B	110.
G G R R	15.	G B R R	47.	Y G R R	79.	Y B R R	111.
G Y G G	16.	G R G G	48.	Y Y G G	80.	Y R G G	112.
G Y G Y	17.	G R G Y	49.	Y Y G Y	81.	Y R G Y	113.
G Y G B	18.	G R G B	50.	Y Y G B	82.	Y R G B	114.
G Y G R	19.	G R G R	51.	Y Y G R	83.	Y R G R	115.
G Y Y G	20.	G R Y G	52.	Y Y Y G	84.	Y R Y G	116.
G Y Y Y	21.	G R Y Y	53.	Y Y Y Y	85.	Y R Y Y	117.
G Y Y B	22.	G R Y B	54.	Y Y Y B	86.	Y R Y B	118.
G Y Y R	23.	G R Y R	55.	Y Y Y R	87.	Y R Y R	119.
G Y B G	24.	G R B G	56.	Y Y B G	88.	Y R B G	120.
G Y B Y	25.	G R B Y	57.	Y Y B Y	89.	Y R B Y	121.
G Y B B	26.	G R B B	58.	Y Y B B	90.	Y R B B	122.
G Y B R	27.	G R B R	59.	Y Y B R	91.	Y R B R	123.
G Y R G	28.	G R R G	60.	Y Y R G	92.	Y R R G	124.
G Y R Y	29.	G R R Y	61.	Y Y R Y	93.	Y R R Y	125.
G Y R B	30.	G R R B	62.	Y Y R B	94.	Y R R B	126.
G Y R R	31.	G R R R	63.	Y Y R R	95.	Y R R R	127.

BLUE				RED			
B G G G	128.	B B G G	160.	R G G G	192.	R B G G	224.
B G G Y	129.	B B G Y	161.	R G G Y	193.	R B G Y	225.
B G G B	130.	B B G B	162.	R G G B	194.	R B G B	226.
B G G R	131.	B B G R	163.	R G G R	195.	R B G R	227.
B G Y G	132.	B B Y G	164.	R G Y G	196.	R B Y G	228.
B G Y Y	133.	B B Y Y	165.	R G Y Y	197.	R B Y Y	229.
B G Y B	134.	B B Y B	166.	R G Y B	198.	R B Y B	230.
B G Y R	135.	B B Y R	167.	R G Y R	199.	R B Y R	231.
B G B G	136.	B B B G	168.	R G B G	200.	R B B G	232.
B G B Y	137.	B B B Y	169.	R G B Y	201.	R B B Y	233.
B G B B	138.	B B B B	170.	R G B B	202.	R B B B	234.
B G B R	139.	B B B R	171.	R G B R	203.	R B B R	235.
B G R G	140.	B B R G	172.	R G R G	204.	R B R G	236.
B G R Y	141.	B B R Y	173.	R G R Y	205.	R B R Y	237.
B G R B	142.	B B R B	174.	R G R B	206.	R B R B	238.
B G R R	143.	B B R R	175.	R G R R	207.	R B R R	239.
B Y G G	144.	B R G G	176.	R Y G G	208.	R R G G	240.
B Y G Y	145.	B R G Y	177.	R Y G Y	209.	R R G Y	241.
B Y G B	146.	B R G B	178.	R Y G B	210.	R R G B	242.
B Y G R	147.	B R G R	179.	R Y G R	211.	R R G R	243.
B Y Y G	148.	B R Y G	180.	R Y Y G	212.	R R Y G	244.
B Y Y Y	149.	B R Y Y	181.	R Y Y Y	213.	R R Y Y	245.
B Y Y B	150.	B R Y B	182.	R Y Y B	214.	R R Y B	246.
B Y Y R	151.	B R Y R	183.	R Y Y R	215.	R R Y R	247.
B Y B G	152.	B R B G	184.	R Y B G	216.	R R B G	248.
B Y B Y	153.	B R B Y	185.	R Y B Y	217.	R R B Y	249.
B Y B B	154.	B R B B	186.	R Y B B	218.	R R B B	250.
B Y B R	155.	B R B R	187.	R Y B R	219.	R R B R	251.
B Y R G	156.	B R R G	188.	R Y R G	220.	R R R G	252.
B Y R Y	157.	B R R Y	189.	R Y R Y	221.	R R R Y	253.
B Y R B	158.	B R R B	190.	R Y R B	222.	R R R B	254.
B Y R R	159.	B R R R	191.	R Y R R	223.	R R R R	255.